

FIVE NEW SPECIES OF METEORUS (HYMENOPTERA:
BRACONIDAE).

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When at the British Museum recently I was handed four specimens of a remarkable new species of *Meteorus* which I agreed to describe. Since the collections of the United States National Museum contained four other undescribed species of this genus, all of them rather unusual, it has seemed desirable to include descriptions of all five species in the same paper.

Meteorus insignis, new species.

This appears to differ from all described species of the genus in its aciculate second tergite.

Female.—Length about 4 mm. Head wider than thorax; face nearly twice as broad as long, mostly smooth; malar space not more than half as long as basal width of mandible; temple convex, not receding; cheek slightly bulging; ocellular line nearly three times as long as diameter of an ocellus; antenna a little shorter than the body, 32- to 33-segmented.

Thorax rather slender; notaulices sharply impressed and finely punctate; mesonotal lobes minutely punctured anteriorly; propodeum gradually declivous, rugose reticulate, without transverse basal or median longitudinal carina; side of pronotum almost entirely smooth and polished; mesopleuron smooth except for a narrow longitudinal strip ventrad and an area below tegula, which are weakly rugulose; hind coxa smooth, with only a little weak punctation at base; first abscissa of radius not more than half width of stigma and shorter than second abscissa, the latter less than half as long as first intercubitus; radial cell ending distinctly before apex of wing; recurrent vein entering first cubital cell at apex, nearly interstitial; radiellian cell not widening apically; nervellus slightly longer than lower abscissa of basella.

First tergite with a very short petiole, the deep dorsal fossae about as far from base of tergite as petiole is wide, spiracles at or slightly before middle, surface of tergite closely longitudinally rugulose; second tergite closely, almost completely aciculate; second suture fine but distinct; third and following tergites smooth and polished; ovipositor sheath about as long as propodeum and abdomen combined.

Black; clypeus and mandibles reddish brown; palpi yellow; antennae brown, darkest apically; wings subhyaline, stigma and veins dark brown, the former with a pale spot at base; tegulae dirty brownish yellow; legs testaceous, posterior tibiae, except narrowly at bases, and posterior tarsi blackish.

Type locality.—Bricket Wood, Herts, England.

Type.—In the British Museum; also one paratype deposited in that collection; two paratypes in the U. S. National Museum, No. 53134.

Described from four female specimens taken June 17, 1936, by R. B. Benson, of the Division of Entomology, British Museum of Natural History.

Meteorus cognatus, new species.

Although only a single specimen is available, this species is described here since it resembles the preceding form in the unusual characteristic of a sculptured second tergite. It is also like that species in general habitus, in color, and in many structural details, but it may be readily distinguished by the coarsely sculptured side of the pronotum, longer first abscissa of radius, longer radial cell, more abruptly declivous propodeum, and larger size. From the foregoing description of *insignis* it differs as follows:

Female.—Length 5.5 mm. Face minutely punctate and rather dull; antennae 36-segmented; notaulices foveate; mesonotal lobes not distinctly punctate, even anteriorly; propodeum coarsely rugulose reticulate, rather abruptly declivous behind and with the basal transverse carina and the median longitudinal carina more or less distinct; side of pronotum coarsely rugose except narrowly along upper margin; mesopleuron with a broad rugulose area ventrad; first abscissa of radius only a little shorter than width of stigma and about as long as second abscissa, the latter about half as long as first intercubitus; radial cell almost attaining extreme apex of wing; fossae of first tergite removed from base by more than width of petiole. Mandibles yellowish; wings hyaline, stigma brownish yellow without a pale spot at base; tegulae bright yellow.

Type locality.—Great Alpine Creek, Tahoe, Calif.

Type.—U. S. National Museum No. 53135.

Described from a single specimen collected July 16, 1915, by E. P. Van Duzee.

Meteorus crassifemur, new species.

This species runs to couplet 4 in my key to the North American species,¹ but it disagrees with the first alternate in having the lower abscissa of the basella much shorter than the nervellus, and with the second alternate in the longer ocellular line. It closely resembles *maximus* Muesebeck, but from that species it may be distinguished by the longer ocellular line, broader face, and stout hind femur.

Female.—Length about 10 mm. Head a little broader than thorax; temple convex, at least half as broad as eye; face twice as broad as long, closely, finely punctate; malar space about one-third as long as basal width of mandible; ocellular line definitely longer than greatest diameter of an ocellus; antennae usually 43- to 45-segmented.

¹ Proc. U. S. Nat. Mus. 63 (2): 7, 1923.

Thorax elongate, deeper than broad; notaulices foveolate, meeting in a large impressed area which is divided by a delicate median longitudinal keel; propodeum rugose reticulate, with a prominent arched basal transverse carina, and a more or less complete median longitudinal carina; side of pronotum finely rugulose; lower sunken half of mesopleuron closely punctate; nervulus interstitial; first abscissa of radius less than half as long as second, the latter about as long as second intercubitus; radial cell ending well before apex of wing; recurrent vein entering first cubital cell at extreme apex; lower abscissa of basella less than half as long as nervellus, the latter about as long as upper abscissa of basella; radiellian cell widening apically, weakly constricted at end of basal third, the cross vein wanting; posterior coxa minutely punctate; hind femur rather stout, not distinctly twice as long as trochanter and only about four times as long as broad; posterior tibia a little longer than femur and trochanter combined.

Abdomen a little stouter than in *maximus*; first tergite finely rugulose beyond spiracles and with two conspicuous dorsal fossae before spiracles; ventral margins of first tergite widely separated; second and following tergites polished; ovipositor sheath hardly half as long as abdomen.

Ferruginous; antennae blackish apically, apices of posterior tibiae dark; posterior tarsi yellowish white; wings hyaline, iridescent; stigma brownish yellow; veins darker.

Type locality.—Wellington, Kans.

Type.—U. S. National Museum No. 53136.

Described from four female specimens: Type collected by E. G. Kelly; one paratype from Texas (Belfrage Collection); one from Brookings, S. Dak., June 14, 1923, G. I. Gilbertson; and one from Winfield, Kans., 1935, Charles E. Burt.

Meteorus townsendi, new species.

This species appears to differ from all described South American forms in combining an incompletely margined occiput, a relatively long first abscissa of the radius, rather strongly infuscated wings, and dark tegulae.

Female.—Length 3.5 mm. Head not quite so wide as thorax, strongly transverse, smooth; temple receding gradually from eye margin; occipital carina interrupted medially; malar space longer than basal width of mandible; ocellular line more than twice greatest diameter of an ocellus; antennae usually 25- to 28-segmented; maxillary palpus not longer than height of head.

Thorax short and compact; notaulices sharply impressed; mesonotal lobes mostly smooth, the median lobe shallowly impressed down the middle, finely punctate anteriorly; scutellum very small, smooth, barely longer than the large sulcus at its base, the latter divided by a median carina into two large pits; propodeum rugoso-reticulate, excavated medially on posterior declivity; mesopleuron smooth, with a broad impression below crossed by several carinae; hind coxa smooth; first abscissa of radius much longer than second and as long as width of stigma; second abscissa of radius not more than half as long as

second transverse cubitus; radial cell very nearly attaining extreme apex of wing; recurrent interstitial with first transverse cubitus or entering first cubital cell at extreme apex; lower abscissa of basella at least as long as nervellus; radiella and cubitella rather strongly sinuate; radiellian cell in widest part nearly as wide as cubitellian cell at narrowest point.

Abdomen narrower than thorax; first tergite very slender at base, with no indication of dorsal foveae, smooth before spiracles, delicately longitudinally aciculate caudad except for a smooth strip medially, ventral margins meeting on basal half; second and following tergites polished; ovipositor sheath about half as long as abdomen; ovipositor strongly thickened toward base.

Honey yellow, with head and mesonotum tinged with ferruginous; palpi pale; antennae and tegulae blackish; wings strongly infumated basally, more weakly so apically; stigma and veins brown; apex of posterior tibia, and posterior tarsus except basal two-thirds of metatarsus, blackish.

Male.—Differs in no essential respect from the female.

Type locality.—Belterra, Para, Brazil.

Type.—U. S. National Museum No. 53137.

Host.—A sphingid larva feeding on rubber.

Cocoons.—In a compact mass enclosed in loose silk and suspended on a silken thread several inches in length.

Described from 11 females and 13 males reared in August, 1938, by E. D. Townsend.

Meteorus congregatus, new species.

Closely related to *townsendi* but distinguished by the complete occipital carina, shorter malar space, relatively shorter first abscissa of radius, absence of impression on median lobe of mesoscutum, and relatively narrower radiellian cell.

Female.—Agrees with the foregoing description of *townsendi* except as follows: Temple strongly receding but distinctly a little convex; malar space about equal to basal width of mandible; occipital carina weak medially but complete; antennae usually 27- to 30-segmented. Notaulices more shallowly impressed than in *townsendi*; middle mesonotal lobe not at all impressed down the middle but with a more or less distinct median longitudinal keel; propodeum coarsely rugose reticulate; mesopleuron minutely punctate, longitudinal impression shallow and rugose; first abscissa of radius much longer than second but shorter than greatest width of stigma; lower abscissa of basella longer than nervellus; radiellian cell in widest part only about half as wide as cubitellian cell at narrowest point; first tergite rather strongly, evenly, longitudinally aciculate on apical half, ovipositor slender. Head, thorax, and abdomen honey yellow; wings less strongly but more uniformly infumated than in *townsendi*, tegulae brown.

Male.—Essentially like the female.

Type locality.—Ancon, Canal Zone.

Type.—U. S. National Museum No. 53138.

Host.—Larva of *Erinnyis ello* (L.) on papaya.

Cocoons.—The single cluster at hand is more than 3 inches in length and apparently contains several hundred cocoons which are surrounded by some loose silk.

Described from 15 females and 4 males reared in October, 1926, by James Zetek, of the Bureau of Entomology and Plant Quarantine under his number 2822.

A NEW DOLICHOPUS FROM IOWA (DIPTERA).¹

By F. C. HARMSTON AND G. F. KNOWLTON.²

During the past year the writers have had the opportunity of examining the Dolichopodidae material of the Iowa Wesleyan College through the courtesy of Professor H. E. Jaques. The following species appears to be undescribed.³

Dolichopus jaquesi, n. sp.

Male.—Length 5–5.2 mm.; wing 4.8–5 mm. Face short, wide, sides nearly parallel, covered with ochre yellow pollen which extends above the antennae, especially along the orbits. Front green. Palpi deep velvety black. Antennae wholly black, third joint but little longer than wide, rounded at tip. Orbital cilia black. Thorax covered with brownish pollen, almost hiding coppery ground color; pleurae blackish with coppery reflections, dulled with grey pollen. Abdomen dark green with coppery reflections, dusted with grey pollen. Hypopygium large, black; its moderate sized lamellae of a greyish color with deeply jagged black border; rather truncate at apex. Coxae black; anterior pair dusted with grey pollen and having strong black bristles at apex. Hairs on anterior surface of fore coxae black. Middle coxae with strong bristles at apex and having the anterior surface clothed with black hairs. Femora black; extreme tips yellowish. Middle and hind femora each with one preapical bristle, the latter ciliate along entire lower inner edge with black hairs which are not longer than one-third the width of the femora. Tibiae black; extreme base yellowish. Middle tibiae with one bristle below. Posterior tibiae slightly thickened at tip. Tarsi black; fore tarsi about one and one-third times as long as their tibiae. First joint of fore tarsi nearly one and a half times the length of second joint; other joints of regularly decreasing length. Middle tarsi one and one-third times the length of corresponding tibiae. Hind tarsi almost one and one-half times the length of their tibiae. First two joints of nearly equal length. Calypsters and halteres yellow, the former with black cilia. Wings greyish, tinged with brown in front of third vein. Costa with elongated enlargement at tip of first vein. Last section of fourth vein bent near its middle, curving forward to run

¹ Contribution from the Department of Entomology, Utah Agricultural Experiment Station.

² Research assistant and associate research professor of entomology, respectively.

³ The writers are indebted to Mr. C. T. Greene for his opinion concerning this species.